FY 2022-23 SCOPE OF WORK PROJECT: 164

Project Title
Middle Green River floodplain sampling and management

Bureau of Reclamation Agreement Number:
R20PG00024

Reclamation Agreement Term
Oct. 1, 2019 – Sept. 30, 2024

Note: Recovery Program FY22-23 scopes of work are drafted in May 2021. They often are revised before final Program approval and may subsequently be revised again in response to changing Program needs. Program participants also recognize the need and allow for some flexibility in scopes of work to accommodate new information (especially in nonnative fish management projects) and changing hydrological conditions.

Lead Agency:
U.S. Fish and Wildlife Service Green River Basin FWCO

Principal Investigator:
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Category:
X Ongoing project
__ Ongoing-revised project
__ Requested new project
__ Unsolicited proposal

Expected Funding Source:
X Annual funds
__ Capital funds
__ Other *[explain]*

Relationship to RIPRAP:
Green River Action Plan
II. Restore Habitat
II.A. Restore and manage flooded bottomland habitat
II.II.5. Manage priority floodplain sites for nursery habitat for endangered fish
II.II.5.b. Johnson Bottom
II.II.5.c. Old Charley Wash
II.II.5.d. Sheppard Bottom
II.II.5.e. Other sites (Leota Bottom, Above Brennan, Escalante Ranch)

Study Background/Rationale and Hypotheses:
Endangered fish of the Colorado River basin use wetlands during various stages to complete their life history. Although researchers in the Green River system spend considerable time sampling fish populations in the main stem river, less work has been conducted in wetlands to determine endangered fish presence. Razorback sucker (*Xyrauchen texanus*; RZB), in particular, use floodplain wetlands throughout their lives, and specifically rely on these habitats during early development from larval to juvenile stages (Modde 1996). Until recently, researchers have had little success documenting these life stages for wild-produced fish (Modde et al. 2001). After several years of meeting stocking goals for hatchery RZB, larval production has increased (Bestgen et al. 2011). In the fall of 2011, wild-spawned RZB were documented in two floodplain wetlands following near-record spring flows and flooding (Webber 2013). In subsequent years, management of Stewart Lake using the Larval Trigger Study Plan (LTSP 2012) has resulted in successful entrainment and recruitment of juvenile RZBs (Partlow et al. 2019; Skorupski et al. 2013; Schelly et al. 2014, 2016; Schelly and Breen 2015). In addition, other wetland sites have entrained wild larvae under LTSP management, including Sheppard Bottom where successful overwintering of juvenile RZB was documented in 2020 (Jones et al. 2015; Smith et al. 2019, 2020). This confirms that the adult RZB population is sufficient to produce larvae, larvae can be entrained into wetland habitats, and recruitment of larvae to juvenile size is feasible. Bonytail (*Gila elegans*) have also been encountered in Stewart Lake and Johnson Bottom, both as stocked adults and wild-produced juveniles (Bestgen et al. 2017). Now that evidence exists that recruitment is possible, the goal of this project is to continue monitoring and managing wetland habitats for young-of-year RZB and bonytail. We also plan on conducting more extensive bonytail monitoring in Old Charley Wash and Johnson Bottom by using PIT tag antennas to track survival of these fish post-stocking. This project will also fulfill some of the monitoring and assessment objectives in the RZB monitoring plan (Bestgen et al. 2012) and assess LTSP flow recommendations for Flaming Gorge operations. USFWS obtained grants to renovate the Johnson Bottom and Sheppard Bottom floodplains, with a specific focus on establishing floodplain connection for implementing the LTSP. Much of the monitoring and management for both sites will occur under this SOW, and we anticipate the sites will be able to connect in low to moderate flow conditions, thus making them available on a more frequent basis. Negotiations to renew the lease for Old Charley Wash in 2018 were successful and beginning in 2019, this site has been managed as a component of this project.

Study Goals, Objectives, End Product(s):
Goals: Determine endangered fish use of wetlands and manage wetlands to benefit these fish.

Objectives:

1. Sample wetlands during RZB larval drift period to determine where entrainment has occurred and to assess LTSP effectiveness in connecting focal habitats.
2. Describe connection flows, period of connection, and collect water quality information at wetlands sampled each year.
3. Manage water control structures and nonnative fish exclusion features at Johnson Bottom, Sheppard Bottom, and Old Charley Wash to entrain RZB into these wetlands.
4. Coordinate bonytail stocking into focal wetlands.
5. Sample wetlands in fall and release collected fish into the Green River.
6. Drain Johnson Bottom and Old Charley Wash. Enumerate, measure, and weigh RZB and bonytail released in the Green River and record the combined mass of all nonnative fish removed.

7. Conduct spring sampling in wetlands where endangered fish were suspected or intended to overwinter.

End Product: Annual report summarizing presence/absence data for endangered fish in wetlands. The report will also summarize LTSP operations and sites connected under each year's hydrologic conditions, as well as describing fish communities in wetlands sampled during the fall.

Study Area:
Green River wetlands between Razorback Bar (RM 311) and the Ouray bridge (RM 248).

Study Methods/Approach:
This project will be conducted and coordinated under the guidance of the razorback sucker monitoring plan (Bestgen et al. 2012) and the Larval Trigger Study Plan (LTSP 2012). We will select sampling sites based on each year's hydrology and floodplain habitats identified in these study plans for a given hydrologic regime. We will focus on locations that connect to the river in spring or other observations that may require special attention (e.g., finding a northern pike source at Thunder Ranch in 2011), with particular emphasis on Stirrup, Above Brennan, Johnson Bottom, Sheppard Bottom, and Old Charley Wash. We will sample each wetland with any of the following methods: fyke nets, trammel nets, hoop nets, minnow traps, light traps, electrofishing, hook and line sampling, and/or portable PIT tag antennas. The goal is to document endangered fish and sample as many sites as possible, rather than extensive characterization of any particular site. Any endangered fish captured will be measured, weighed, and PIT tagged if not already tagged, and the location to which it will be released will depend on whether or not we believe the fish can survive through winter in its current location. Nonnative fish community information (species, relative order of abundance) will be gathered in each wetland, and nonnative fish will be euthanized. In addition, the total mass of all small-bodied nonnative fish removed will be recorded. Temperature and dissolved oxygen loggers will be deployed at these sites to collect water quality information. This information would be summarized and provided to the Program Director's office in the form of an annual report, although significant or unusual findings will be communicated as they occur (e.g., if wild-produced razorback sucker juveniles are found or an alarming amount of nonnative fish of concern are found like the case of northern pike in Thunder Ranch 2011).

Green River Basin FWCO personnel will initiate floodplain inundation at Johnson, Sheppard, and Old Charley Bottoms once larval RZBs are detected in the river. Water control structures at these wetlands have been modified to preclude entrainment of adult nonnative fishes by using ½" screens. Water quality will be monitored throughout the growing season. Supplemental water will be added at Sheppard Bottom with the Pelican Lake pipeline if deemed necessary. We also have the ability to pump water into Johnson and Old Charley Bottoms using 8" pumps, however this is not reflected in budgets below. Finally, the wetlands will be sampled and/or drained, in coordination with Ouray NWR objectives, in the fall, either to release any juvenile RZBs back to the river or to facilitate resetting the wetland of any nonnative populations.

Task Description, Deliverables and Schedule:
Task 1: Sample flooded wetlands via light trapping during larval RZB drift.
Task 2: Collect data on floodplain connection and manage wetlands for fish entrainment.
Task 3: Conduct PIT tag antenna monitoring to track survival of stocked bonytail.
Task 4: Drain managed wetlands and sample all wetlands for fish survival and community composition.
Task 5: Analyze data, summarize findings in annual report, submit data to database manager.

Task	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1					X	X	X					
2					X	X	X					
3					X	X	X	X				
4									X	X		
5										X	X	X

Budget Summary:

FY Year	
2022	$59,622
2023	$60,048
2024	$77,703
2025	$87,625
2026	$89,482
Total	$374,480

Reviewers:

References:

Bestgen, K. R., G. B. Haines, and A. A. Hill. 2011. Synthesis of flood plain wetland information: Timing of razorback sucker preproduction in the Green River, Utah, related to stream flow, water temperature, and flood plain wetland availability. Final Report to the Upper Colorado River Endangered Fish Recovery Program, Denver. Larval Fish Laboratory Contribution 163.

Bestgen, K. R., K. A. Zelasko, and G. C. White. 2012. Monitoring reproduction, recruitment and population status of razorback suckers in the upper Colorado River Basin. Report to the Upper Colorado River Endangered Fish Recovery Program. Larval Fish Laboratory Contribution 170, Colorado State University, Fort Collins.

Bestgen, K.R., R.C. Schelly, R.R. Staffeldt, M.J. Breen, D.E. Snyder, and M.T. Jones. 2017. First reproduction by stocked bonytail in the upper Colorado River basin. North American Journal of Fisheries Management 37: 445-455.

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Larval Trigger Study Plan Ad Hoc Committee. 2012. Study plan to examine the effects of using larval razorback sucker occurrence in the Green River as a trigger for Flaming Gorge Dam peak releases. Final Report to the Upper Colorado River Endangered Fish Recovery Program, Denver, CO.

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Schelly, R., J.T. Herdmann, and M.J. Breen. 2014. Use of the Stewart Lake floodplain by larval and adult endangered fishes. Annual report to the Upper Colorado River Endangered Fish Recovery Program, Denver, CO.

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Schelly, R., R.R. Staffeldt, and M.J. Breen. 2016. Use of the Stewart Lake floodplain by larval and adult endangered fishes. Annual report to the Upper Colorado River Endangered Fish Recovery Program, Denver, CO.

Skorupski, Jr., J.A., I. Harding, and M.J. Breen. 2013. Use of the Stewart Lake floodplain by larval and adult endangered fishes. Annual report to the Upper Colorado River Endangered Fish Recovery Program, Denver, CO.

Smith, C. and D. Beers. 2019. Middle Green River floodplain sampling and management. Annual report to the Upper Colorado River Endangered Fish Recovery Program, Denver, CO.

Smith, C. and D. Beers. 2020. Middle Green River floodplain sampling and management. Annual report to the Upper Colorado River Endangered Fish Recovery Program, Denver, CO.

Webber, P. A., 2013. Juvenile razorback sucker documented in wetlands in the Green River, Utah. Southwestern Naturalist 58: 366-368.

Webber, A., C. Smith, and T. Jones. 2014. Middle Green River floodplain sampling. Annual report to the Upper Colorado River Endangered Fish Recovery Program, Denver, CO.

SUMMARY OF PROPOSED COSTS

Name of Servicing Agency:	US Fish & Wildlife Service Green River Basin FWCO
Project Name:	Recovery Program Project FR-164: Middle Green River floodplain sampling and management

		YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL
Enter the BEGINNING dates for each year ------>		**10/1/2021**		**10/1/2022**		**10/1/2023**		**10/1/2024**		**10/1/2025**		
		Through		Through		Through		Through		Through		
Enter the ENDING dates for each year ------->		**9/30/2022**		**9/30/2023**		**9/29/2024**		**9/30/2025**		**9/30/2026**		
DIRECT LABOR AND FRINGE BENEFIT COSTS:		**YEAR 1**		**YEAR 2**		**YEAR 3**		**YEAR 4**		**YEAR 5**		**TOTAL**
Direct Labor - Hourly		$ 37,595.28		$ 37,897.24		$ 49,606.42		$ 56,561.50		$ 57,692.73		$ 239,353.16
Fringe Benefits - Hourly		$ 13,959.46		$ 14,070.36		$ 19,262.13		$ 21,742.78		$ 22,177.63		$ 91,212.37
Subtotal of Direct Labor & Fringe Benefits:		**$ 51,554.74**		**$ 51,967.60**		**$ 68,868.55**		**$ 78,304.27**		**$ 79,870.36**		**$ 330,565.53**
OTHER DIRECT COSTS:		**YEAR 1**		**YEAR 2**		**YEAR 3**		**YEAR 4**		**YEAR 5**		**TOTAL**
Materials and Supplies		$ 6,331.00		$ 6,331.00		$ 6,571.30		$ 6,768.41		$ 7,005.32		$ 33,007.03
Travel Costs		$ -		$ -		$ -		$ -		$ -		$ -
Equipment		$ -		$ -		$ -		$ -		$ -		$ -
Contractors		$ -		$ -		$ -		$ -		$ -		$ -
Subtotal of Other Direct Costs:		**$ 6,331.00**		**$ 6,331.00**		**$ 6,571.30**		**$ 6,768.41**		**$ 7,005.32**		**$ 33,007.03**
INDIRECT/OVERHEAD COSTS:		**YEAR 1**		**YEAR 2**		**YEAR 3**		**YEAR 4**		**YEAR 5**		**TOTAL**
Subtotal of Labor and Other Direct Costs:		**$ 57,885.74**		**$ 58,298.60**		**$ 75,439.85**		**$ 85,072.68**		**$ 86,875.68**		$ 363,572.56
Total dollars exempt from indirect/overhead base:		$ -		$ -		$ -		$ -		$ -		
<Enter Description of Indirect/OH Cost #1>	3.00%	$ 1,736.57	3.00%	$ 1,748.96	3.00%	$ 2,263.20	3.00%	$ 2,552.18	3.00%	$ 2,606.27		$ 10,907.18
Total dollars exempt from indirect/overhead base:		$ -		$ -		$ -		$ -		$ -		
<Enter Description of Indirect/OH Cost #2>	0.00%	$ -	0.00%	$ -	0.00%	$ -	0.00%	$ -	0.00%	$ -		$ -
Subtotal of Indirect/Overhead Costs:		**$ 1,736.57**		**$ 1,748.96**		**$ 2,263.20**		**$ 2,552.18**		**$ 2,606.27**		**$ 10,907.18**

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
GRAND TOTAL:	**$ 59,622.32**	**$ 60,047.56**	**$ 77,703.04**	**$ 87,624.86**	**$ 89,481.95**	**$ 374,479.74**

SUMMARY OF DIRECT LABOR & FRINGE BENEFITS

Enter Escalation Rates ------->	Yr 2 Escalation Rate	0.00%

							YEAR 1					YEAR 2				
							10/1/2021		Through	9/30/2022		10/1/2022		Through	9/30/2023	
	Task # or Description	Position Title	GS/WG Grade	GS/WG Step	OPM Pay Location	Current Hourly Rate	# of Hours	Hourly Rate	Salary Cost	Fringe Rate	Fringe Cost	# of Hours	Hourly Rate	Salary Cost	Fringe Rate	Fringe Cost
1	1	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	20.0	$ 38.37	$ 767.40	37.00%	$ 283.94	20.0	$ 39.60	$ 792.00	37.00%	$ 293.04
2	1	Biological Science Technicia	GS 6	3	Rest of US	$ 20.09	80.0	$ 20.09	$ 1,607.20	29.00%	$ 466.09	80.0	$ 20.09	$ 1,607.20	29.00%	$ 466.09
3	1	Fisheries Technician	GS 8	10	Rest of US	$ 30.14	64.0	$ 30.14	$ 1,928.96	52.00%	$ 1,003.06	64.0	$ 30.14	$ 1,928.96	52.00%	$ 1,003.06
4	2	Fisheries Biologist	GS 11	1	Rest of US	$ 30.98	-	$ 30.98	$ -	30.00%	$ -	-	$ 32.01	$ -	30.00%	$ -
5	2	Biological Science Technicia	GS 6	3	Rest of US	$ 20.09	80.0	$ 20.09	$ 1,607.20	29.00%	$ 466.09	80.0	$ 20.09	$ 1,607.20	29.00%	$ 466.09
6	2	Fisheries Technician	GS 8	10	Rest of US	$ 30.14	40.0	$ 30.14	$ 1,205.60	52.00%	$ 626.91	40.0	$ 30.14	$ 1,205.60	52.00%	$ 626.91
7	2	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	32.0	$ 38.37	$ 1,227.84	37.00%	$ 454.30	32.0	$ 39.60	$ 1,267.20	37.00%	$ 468.86
8	3	Fisheries Biologist	GS 11	1	Rest of US	$ 30.98	-	$ 30.98	$ -	30.00%	$ -	-	$ 32.01	$ -	30.00%	$ -
9	3	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	-	$ 38.37	$ -	37.00%	$ -	-	$ 39.60	$ -	37.00%	$ -
10	3	Biological Science Technicia	GS 6	3	Rest of US	$ 20.09	-	$ 20.09	$ -	29.00%	$ -	-	$ 20.09	$ -	29.00%	$ -
12	3	Fisheries Technician	GS 8	10	Rest of US	$ 30.14	-	$ 30.14	$ -	52.00%	$ -	-	$ 30.14	$ -	52.00%	$ -
13	4	Fisheries Biologist	GS 11	1	Rest of US	$ 30.98	40.0	$ 30.98	$ 1,239.20	35.00%	$ 433.72	40.0	$ 32.01	$ 1,280.40	35.00%	$ 448.14
14	4	Fisheries Technician	GS 8	10	Rest of US	$ 30.14	110.0	$ 30.14	$ 3,315.40	52.00%	$ 1,724.01	110.0	$ 30.14	$ 3,315.40	52.00%	$ 1,724.01
15	4	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	80.0	$ 38.37	$ 3,069.60	37.00%	$ 1,135.75	80.0	$ 39.60	$ 3,168.00	37.00%	$ 1,172.16
16	4	Biological Science Technicia	GS 6	3	Rest of US	$ 20.09	480.0	$ 20.09	$ 9,643.20	29.00%	$ 2,796.53	480.0	$ 20.09	$ 9,643.20	29.00%	$ 2,796.53
17	5	Project Leader	GS 13	5	Rest of US	$ 50.04	90.0	$ 50.04	$ 4,503.60	40.00%	$ 1,801.44	90.0	$ 50.04	$ 4,503.60	40.00%	$ 1,801.44
18	5	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	80.0	$ 38.37	$ 3,069.60	37.00%	$ 1,135.75	80.0	$ 39.60	$ 3,168.00	37.00%	$ 1,172.16
19	5	Administrative Officer	GS 9	9	Rest of US	$ 32.43	136.0	$ 32.43	$ 4,410.48	37.00%	$ 1,631.88	136.0	$ 32.43	$ 4,410.48	37.00%	$ 1,631.88
20						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
21						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
22						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
23						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
24						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
25						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
26						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
27						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
28						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
29						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
30						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
31						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
							1,332.00		**$ 37,595.28**		**$ 13,959.46**	**1,332.00**		**$ 37,897.24**		**$ 14,070.36**

SUMMARY OF DIRECT LABOR & FRINGE BENEFITS

Yr 3 Escalation Rate	2.00%

Yr 4 Escalation Rate	2.00%

							YEAR 3						YEAR 4				
							10/1/2023		Through	9/29/2024			10/1/2024		Through	9/30/2025	
	Task # or Description	Position Title	GS/WG Grade	GS/WG Step	OPM Pay Location	Current Hourly Rate	# of Hours	Hourly Rate	Salary Cost	Fringe Rate	Fringe Cost	# of Hours	Hourly Rate	Salary Cost	Fringe Rate	Fringe Cost
1	1	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	20.0	$ 40.84	$ 816.80	37.00%	$ 302.22	20.0	$ 41.66	$ 833.14	37.00%	$ 308.26
2	1	Biological Science Technicia	GS 6	3	Rest of US	$ 20.09	90.0	$ 20.49	$ 1,844.26	29.00%	$ 534.84	80.0	$ 20.90	$ 1,672.13	29.00%	$ 484.92
3	1	Fisheries Technician	GS 8	10	Rest of US	$ 30.14	66.0	$ 30.74	$ 2,029.02	52.00%	$ 1,055.09	95.0	$ 31.36	$ 2,978.98	52.00%	$ 1,549.07
4	2	Fisheries Biologist	GS 11	1	Rest of US	$ 30.98	-	$ 33.04	$ -	30.00%	$ -	34.0	$ 34.08	$ 1,158.72	30.00%	$ 347.62
5	2	Biological Science Technicia	GS 6	3	Rest of US	$ 20.09	80.0	$ 20.49	$ 1,639.34	29.00%	$ 475.41	12.0	$ 20.90	$ 250.82	29.00%	$ 72.74
6	2	Fisheries Technician	GS 8	10	Rest of US	$ 30.14	120.0	$ 30.74	$ 3,689.14	52.00%	$ 1,918.35	80.0	$ 31.36	$ 2,508.61	52.00%	$ 1,304.48
7	2	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	30.0	$ 40.84	$ 1,225.20	37.00%	$ 453.32	60.0	$ 41.66	$ 2,499.41	37.00%	$ 924.78
8	3	Fisheries Biologist	GS 11	1	Rest of US	$ 30.98	-	$ 33.04	$ -	30.00%	$ -	40.0	$ 34.08	$ 1,363.20	30.00%	$ 408.96
9	3	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	30.0	$ 40.84	$ 1,225.20	37.00%	$ 453.32	39.0	$ 41.66	$ 1,624.62	37.00%	$ 601.11
10	3	Biological Science Technicia	GS 6	3	Rest of US	$ 20.09	120.0	$ 20.49	$ 2,459.02	29.00%	$ 713.11	80.0	$ 20.90	$ 1,672.13	29.00%	$ 484.92
12	3	Fisheries Technician	GS 8	10	Rest of US	$ 30.14	60.0	$ 30.74	$ 1,844.57	52.00%	$ 959.18	80.0	$ 31.36	$ 2,508.61	52.00%	$ 1,304.48
13	4	Fisheries Biologist	GS 11	1	Rest of US	$ 30.98	37.0	$ 33.04	$ 1,222.48	35.00%	$ 427.87	80.0	$ 34.08	$ 2,726.40	35.00%	$ 954.24
14	4	Fisheries Technician	GS 8	10	Rest of US	$ 30.14	200.0	$ 30.74	$ 6,148.56	52.00%	$ 3,197.25	160.0	$ 31.36	$ 5,017.22	52.00%	$ 2,608.96
15	4	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	80.0	$ 40.84	$ 3,267.20	37.00%	$ 1,208.86	100.0	$ 41.66	$ 4,165.68	37.00%	$ 1,541.30
16	4	Biological Science Technicia	GS 6	3	Rest of US	$ 20.09	480.0	$ 20.49	$ 9,836.06	29.00%	$ 2,852.46	480.0	$ 20.90	$ 10,032.79	29.00%	$ 2,909.51
17	5	Project Leader	GS 13	5	Rest of US	$ 50.04	90.0	$ 51.04	$ 4,593.67	40.00%	$ 1,837.47	118.0	$ 52.06	$ 6,143.27	40.00%	$ 2,457.31
18	5	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	80.0	$ 40.84	$ 3,267.20	37.00%	$ 1,208.86	80.0	$ 41.66	$ 3,332.54	37.00%	$ 1,233.04
19	5	Administrative Officer	GS 9	9	Rest of US	$ 32.43	136.0	$ 33.08	$ 4,498.69	37.00%	$ 1,664.52	180.0	$ 33.74	$ 6,073.23	37.00%	$ 2,247.10
20						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
21						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
22						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
23						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
24						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
25						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
26						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
27						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
28						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
29						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
30						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
31						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
						$ -	-	$ -	$ -	0.00%	$ -	-	$ -	$ -	0.00%	$ -
							1,719.00		$ 49,606.42		$ 19,262.13	1,818.00		$ 56,561.50		$ 21,742.78

SUMMARY OF DIRECT LABOR & FRINGE BENEFITS

Yr 5 Escalation Rate	2.00%

	Task # or Description	Position Title	GS/WG Grade	GS/WG Step	OPM Pay Location	Current Hourly Rate	YEAR 5 10/1/2025 Through 9/30/2026 # of Hours	Hourly Rate	Salary Cost	Fringe Rate	Fringe Cost	Total Salary Cost	Total Fringe Cost	Total Labor Cost
1	1	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	20.0	$ 42.49	$ 849.80	37.00%	$ 314.43	$ 4,059.13	$ 1,501.88	**$ 5,561.01**
2	1	Biological Science Technicia	GS 6	3	Rest of US	$ 20.09	80.0	$ 21.32	$ 1,705.57	29.00%	$ 494.62	$ 8,436.37	$ 2,446.55	**$ 10,882.91**
3	1	Fisheries Technician	GS 8	10	Rest of US	$ 30.14	95.0	$ 31.98	$ 3,038.56	52.00%	$ 1,580.05	$ 11,904.48	$ 6,190.33	**$ 18,094.81**
4	2	Fisheries Biologist	GS 11	1	Rest of US	$ 30.98	34.0	$ 34.76	$ 1,181.89	30.00%	$ 354.57	$ 2,340.61	$ 702.18	**$ 3,042.80**
5	2	Biological Science Technicia	GS 6	3	Rest of US	$ 20.09	12.0	$ 21.32	$ 255.84	29.00%	$ 74.19	$ 5,360.40	$ 1,554.52	**$ 6,914.92**
6	2	Fisheries Technician	GS 8	10	Rest of US	$ 30.14	80.0	$ 31.98	$ 2,558.78	52.00%	$ 1,330.57	$ 11,167.73	$ 5,807.22	**$ 16,974.95**
7	2	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	60.0	$ 42.49	$ 2,549.40	37.00%	$ 943.28	$ 8,769.04	$ 3,244.55	**$ 12,013.59**
8	3	Fisheries Biologist	GS 11	1	Rest of US	$ 30.98	40.0	$ 34.76	$ 1,390.46	30.00%	$ 417.14	$ 2,753.66	$ 826.10	**$ 3,579.76**
9	3	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	39.0	$ 42.49	$ 1,657.11	37.00%	$ 613.13	$ 4,506.92	$ 1,667.56	**$ 6,174.48**
10	3	Biological Science Technicia	GS 6	3	Rest of US	$ 20.09	80.0	$ 21.32	$ 1,705.57	29.00%	$ 494.62	$ 5,836.72	$ 1,692.65	**$ 7,529.37**
12	3	Fisheries Technician	GS 8	10	Rest of US	$ 30.14	80.0	$ 31.98	$ 2,558.78	52.00%	$ 1,330.57	$ 6,911.97	$ 3,594.22	**$ 10,506.19**
13	4	Fisheries Biologist	GS 11	1	Rest of US	$ 30.98	80.0	$ 34.76	$ 2,780.93	35.00%	$ 973.32	$ 9,249.41	$ 3,237.29	**$ 12,486.70**
14	4	Fisheries Technician	GS 8	10	Rest of US	$ 30.14	160.0	$ 31.98	$ 5,117.57	52.00%	$ 2,661.14	$ 22,914.15	$ 11,915.36	**$ 34,829.51**
15	4	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	100.0	$ 42.49	$ 4,248.99	37.00%	$ 1,572.13	$ 17,919.47	$ 6,630.21	**$ 24,549.68**
16	4	Biological Science Technicia	GS 6	3	Rest of US	$ 20.09	480.0	$ 21.32	$ 10,233.44	29.00%	$ 2,967.70	$ 49,388.69	$ 14,322.72	**$ 63,711.41**
17	5	Project Leader	GS 13	5	Rest of US	$ 50.04	118.0	$ 53.10	$ 6,266.14	40.00%	$ 2,506.45	$ 26,010.28	$ 10,404.11	**$ 36,414.39**
18	5	Fisheries Biologist	GS 12	2	Rest of US	$ 38.37	80.0	$ 42.49	$ 3,399.19	37.00%	$ 1,257.70	$ 16,236.54	$ 6,007.52	**$ 22,244.06**
19	5	Administrative Officer	GS 9	9	Rest of US	$ 32.43	180.0	$ 34.41	$ 6,194.70	37.00%	$ 2,292.04	$ 25,587.58	$ 9,467.40	**$ 35,054.98**
20						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
21						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
22						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
23						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
24						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
25						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
26						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
27						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
28						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
29						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
30						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
31						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
						$ -	-	$ -	$ -	0.00%	$ -	$ -	$ -	**$ -**
							1,818.00		**$ 57,692.73**		**$ 22,177.63**	**$ 239,353.16**	**$ 91,212.37**	**$ 330,565.53**

SUMMARY OF MATERIALS AND SUPPLIES

SUMMARY OF MATERIALS, SUPPLIES, AND SERVICES

				Yr 2 Escalation Rate	0.00%	Yr 3 Escala

				Year 1			Year 2			
	Task # or Description	Item Description	Rationale for Proposed Cost	Unit Price	Unit Quantity	Subtotal	Unit Price	Unit Quantity	Subtotal	Unit Price
1	1	GSA Lease of Equip Code 6351 (monthly lease)	http://www.gsa.gov/portal/category/21852	$ 232.00	1	$ 232.00	$ 232.00	1	$ 232.00	$ 237.80
2	1	GSA Lease of Equip Code 6351 (mileage rate)	http://www.gsa.gov/portal/category/21852	$ 0.31	100	$ 31.00	$ 0.31	100	$ 31.00	$ 0.32
3	1	GSA Lease of Equip Code 6352 (monthly lease)	http://www.gsa.gov/portal/category/21852	$ 233.00	1	$ 233.00	$ 233.00	1	$ 233.00	$ 238.83
4	1	GSA Lease of Equip Code 6352 (mileage rate)	http://www.gsa.gov/portal/category/21852	$ 0.32	100	$ 32.00	$ 0.32	100	$ 32.00	$ 0.33
5	2	GSA Lease of Equip Code 6351 (monthly lease)	http://www.gsa.gov/portal/category/21852	$ 232.00	1	$ 232.00	$ 232.00	1	$ 232.00	$ 237.80
6	2	GSA Lease of Equip Code 6351 (mileage rate)	http://www.gsa.gov/portal/category/21852	$ 0.31	200	$ 62.00	$ 0.31	200	$ 62.00	$ 0.32
7	2	GSA Lease of Equip Code 6352 (monthly lease)	http://www.gsa.gov/portal/category/21852	$ 233.00	1	$ 233.00	$ 233.00	1	$ 233.00	$ 238.83
8	2	GSA Lease of Equip Code 6352 (mileage rate)	http://www.gsa.gov/portal/category/21852	$ 0.32	200	$ 64.00	$ 0.32	200	$ 64.00	$ 0.33
9	3	GSA Lease of Equip Code 6351 (monthly lease)	http://www.gsa.gov/portal/category/21852	$ 232.00	1	$ 232.00	$ 232.00	1	$ 232.00	$ 237.80
10	3	GSA Lease of Equip Code 6351 (mileage rate)	http://www.gsa.gov/portal/category/21852	$ 0.31	200	$ 62.00	$ 0.31	200	$ 62.00	$ 0.32
11	3	GSA Lease of Equip Code 6352 (monthly lease)	http://www.gsa.gov/portal/category/21852	$ 233.00	1	$ 233.00	$ 233.00	1	$ 233.00	$ 238.83
12	3	GSA Lease of Equip Code 6352 (mileage rate)	http://www.gsa.gov/portal/category/21852	$ 0.32	200	$ 64.00	$ 0.32	200	$ 64.00	$ 0.33
13	4	GSA Lease of Equip Code 6351 (monthly lease)	http://www.gsa.gov/portal/category/21852	$ 232.00	1	$ 232.00	$ 232.00	1	$ 232.00	$ 237.80
14	4	GSA Lease of Equip Code 6351 (mileage rate)	http://www.gsa.gov/portal/category/21852	$ 0.31	1200	$ 372.00	$ 0.31	1200	$ 372.00	$ 0.32
15	4	GSA Lease of Equip Code 6352 (monthly lease)	http://www.gsa.gov/portal/category/21852	$ 233.00	1	$ 233.00	$ 233.00	1	$ 233.00	$ 238.83
16	4	GSA Lease of Equip Code 6352 (mileage rate)	http://www.gsa.gov/portal/category/21852	$ 0.32	1200	$ 384.00	$ 0.32	1200	$ 384.00	$ 0.33
17	2	Sampling gear repair/replacement	Agreement number R15PG00083	$ 1,000.00	1	$ 1,000.00	$ 1,000.00	1	$ 1,000.00	$ 1,025.00
18	3	Sampling gear repair/replacement	Agreement number R15PG00083	$ 1,000.00	1	$ 1,000.00	$ 1,000.00	1	$ 1,000.00	$ 1,025.00
19	4	Sampling gear repair/replacement	Agreement number R15PG00083	$ 1,000.00	1	$ 1,000.00	$ 1,000.00	1	$ 1,000.00	$ 1,025.00
20	2	Boat fuel (gal)	Agreement number R15PG00083	$ 4.00	20	$ 80.00	$ 4.00	20	$ 80.00	$ 4.10
21	3	Boat fuel (gal)	Agreement number R15PG00083	$ 4.00	0	$ -	$ 4.00	0	$ -	$ 4.10
22	4	Boat fuel (gal)	Agreement number R15PG00083	$ 4.00	80	$ 320.00	$ 4.00	80	$ 320.00	$ 4.10
			TOTAL:			**$ 6,331.00**			**$ 6,331.00**	

SUMMARY OF MATERIALS AND SUPPLIES

SUMMARY OF MATERIALS, SUPPLIES, SERVICES			tion Rate	2.50%		Yr 4 Escalation Rate	3.00%
			Year 3			Year 4	
	Task # or Description	Item Description	Unit Quantity	Subtotal	Unit Price	Unit Quantity	Subtotal
1	1	GSA Lease of Equip Code 6351 (monthly lease)	1	$ 237.80	$ 244.93	1	$ 244.93
2	1	GSA Lease of Equip Code 6351 (mileage rate)	100	$ 31.78	$ 0.33	100	$ 32.73
3	1	GSA Lease of Equip Code 6352 (monthly lease)	1	$ 238.83	$ 245.99	1	$ 245.99
4	1	GSA Lease of Equip Code 6352 (mileage rate)	100	$ 32.80	$ 0.34	100	$ 33.78
5	2	GSA Lease of Equip Code 6351 (monthly lease)	1	$ 237.80	$ 244.93	1	$ 244.93
6	2	GSA Lease of Equip Code 6351 (mileage rate)	200	$ 63.55	$ 0.33	200	$ 65.46
7	2	GSA Lease of Equip Code 6352 (monthly lease)	1	$ 238.83	$ 245.99	1	$ 245.99
8	2	GSA Lease of Equip Code 6352 (mileage rate)	200	$ 65.60	$ 0.34	200	$ 67.57
9	3	GSA Lease of Equip Code 6351 (monthly lease)	1	$ 237.80	$ 244.93	1	$ 244.93
10	3	GSA Lease of Equip Code 6351 (mileage rate)	200	$ 63.55	$ 0.33	200	$ 65.46
11	3	GSA Lease of Equip Code 6352 (monthly lease)	1	$ 238.83	$ 245.99	1	$ 245.99
12	3	GSA Lease of Equip Code 6352 (mileage rate)	200	$ 65.60	$ 0.34	200	$ 67.57
13	4	GSA Lease of Equip Code 6351 (monthly lease)	1	$ 237.80	$ 244.93	1	$ 244.93
14	4	GSA Lease of Equip Code 6351 (mileage rate)	1200	$ 381.30	$ 0.33	1200	$ 392.74
15	4	GSA Lease of Equip Code 6352 (monthly lease)	1	$ 238.83	$ 245.99	1	$ 245.99
16	4	GSA Lease of Equip Code 6352 (mileage rate)	1200	$ 393.60	$ 0.34	1200	$ 405.41
17	2	Sampling gear repair/replacement	1	$ 1,025.00	$ 1,055.75	1	$ 1,055.75
18	3	Sampling gear repair/replacement	1	$ 1,025.00	$ 1,055.75	1	$ 1,055.75
19	4	Sampling gear repair/replacement	1	$ 1,025.00	$ 1,055.75	1	$ 1,055.75
20	2	Boat fuel (gal)	20	$ 82.00	$ 4.22	20	$ 84.46
21	3	Boat fuel (gal)	20	$ 82.00	$ 4.22	20	$ 84.46
22	4	Boat fuel (gal)	80	$ 328.00	$ 4.22	80	$ 337.84
				$ 6,571.30			**$ 6,768.41**

SUMMARY OF MATERIALS AND SUPPLIES

SUMMARY OF MATERIALS, SUPPLIES, SERVICES			Yr 5 Escalation Rate		3.50%	
			Year 5			
	Task # or Description	Item Description	Unit Price	Unit Quantity	Subtotal	TOTAL
1	1	GSA Lease of Equip Code 6351 (monthly lease)	$ 253.51	1	$ 253.51	$ 1,200.24
2	1	GSA Lease of Equip Code 6351 (mileage rate)	$ 0.34	100	$ 33.87	$ 160.38
3	1	GSA Lease of Equip Code 6352 (monthly lease)	$ 254.60	1	$ 254.60	$ 1,205.42
4	1	GSA Lease of Equip Code 6352 (mileage rate)	$ 0.35	100	$ 34.97	$ 165.55
5	2	GSA Lease of Equip Code 6351 (monthly lease)	$ 253.51	1	$ 253.51	$ 1,200.24
6	2	GSA Lease of Equip Code 6351 (mileage rate)	$ 0.34	200	$ 67.75	$ 320.76
7	2	GSA Lease of Equip Code 6352 (monthly lease)	$ 254.60	1	$ 254.60	$ 1,205.42
8	2	GSA Lease of Equip Code 6352 (mileage rate)	$ 0.35	200	$ 69.93	$ 331.10
9	3	GSA Lease of Equip Code 6351 (monthly lease)	$ 253.51	1	$ 253.51	$ 1,200.24
10	3	GSA Lease of Equip Code 6351 (mileage rate)	$ 0.34	200	$ 67.75	$ 320.76
11	3	GSA Lease of Equip Code 6352 (monthly lease)	$ 254.60	1	$ 254.60	$ 1,205.42
12	3	GSA Lease of Equip Code 6352 (mileage rate)	$ 0.35	200	$ 69.93	$ 331.10
13	4	GSA Lease of Equip Code 6351 (monthly lease)	$ 253.51	1	$ 253.51	$ 1,200.24
14	4	GSA Lease of Equip Code 6351 (mileage rate)	$ 0.34	1200	$ 406.48	$ 1,924.52
15	4	GSA Lease of Equip Code 6352 (monthly lease)	$ 254.60	1	$ 254.60	$ 1,205.42
16	4	GSA Lease of Equip Code 6352 (mileage rate)	$ 0.35	1200	$ 419.60	$ 1,986.61
17	2	Sampling gear repair/replacement	$ 1,092.70	1	$ 1,092.70	$ 5,173.45
18	3	Sampling gear repair/replacement	$ 1,092.70	1	$ 1,092.70	$ 5,173.45
19	4	Sampling gear repair/replacement	$ 1,092.70	1	$ 1,092.70	$ 5,173.45
20	2	Boat fuel (gal)	$ 4.37	20	$ 87.42	$ 413.88
21	3	Boat fuel (gal)	$ 4.37	20	$ 87.42	$ 253.88
22	4	Boat fuel (gal)	$ 4.37	80	$ 349.66	$ 1,655.50
					$ 7,005.32	**$ 33,007.03**